Human Resource Focused Knowledge Management

John F. Kennedy Space Center

Why Knowledge Management?

- KSC depends heavily on operational experience to build skill in the workforce (both craft and professional)
- Civil servants are moving out of daily operations and more experienced people are retiring
- During the Centerwide reorganization in May 2000 each directorate included knowledge management in the new organization plan

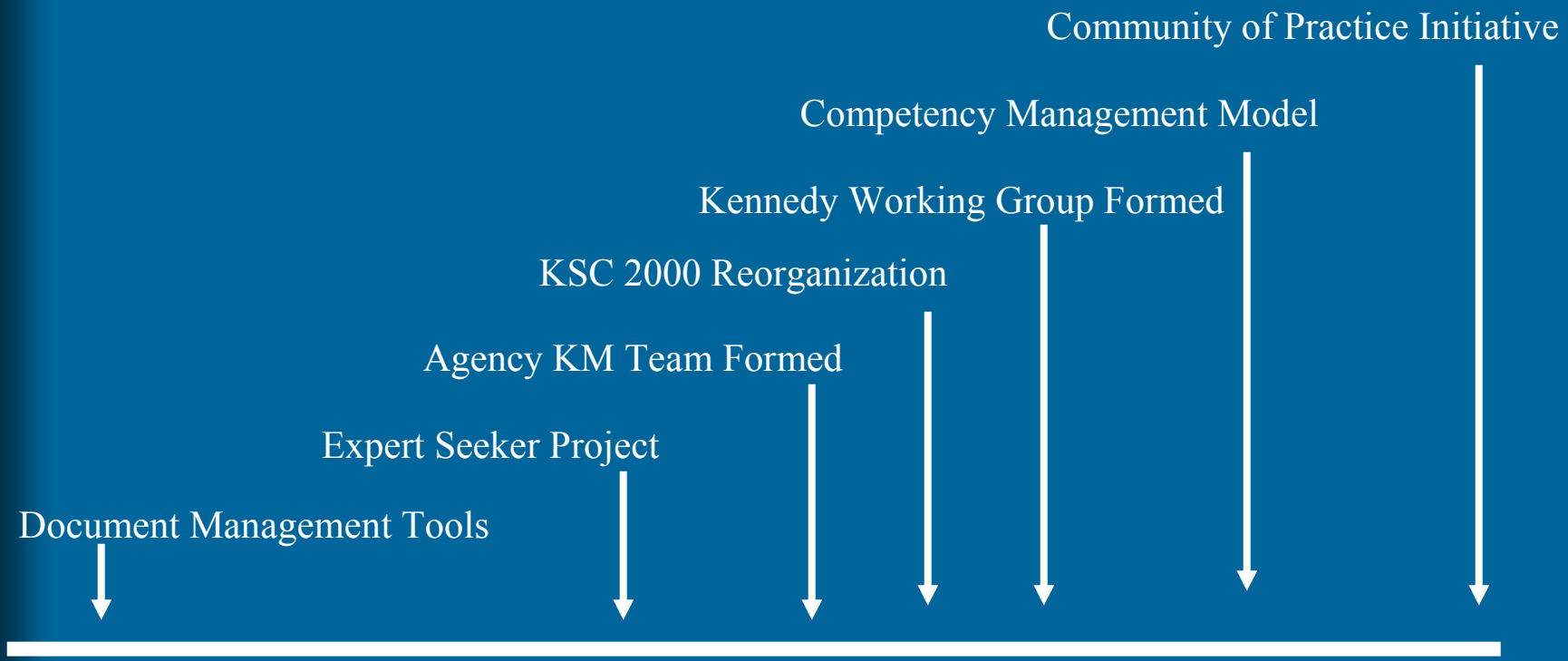
Knowledge Management Objectives

- To develop and to maintain competitive advantage
- To assess current competencies and to plan for the future
- To effectively deploy the KSC workforce

Human Resource Focused Knowledge Management

- The current Knowledge Management focus at the Kennedy Space Center takes on a human resources focus.
- A major project underway is developing a systematic method for understanding the competencies of the current skill base on the Center and then developing a method to maintain, develop or acquire high priority competencies that are vital to the success of key strategic areas.
- A key role of the knowledge manager at KSC will be to manage gaps between current and future knowledge needs.
- KSC Knowledge Management also seeks to enhance the transfer of tacit knowledge to the future workforce through mentoring and networking.

History


Community of Practice Initiative
Competency Management Model
Kennedy Working Group Formed
KSC 2000 Reorganization
Agency KM Team Formed
Expert Seeker Project
Document Management Tools

Knowledge Management Working Group

- Workforce Diversity and Management
  - Steven Chance
  - Loretta Dreier
  - Betty Eldred
  - James Norman
  - Pat Simpkins
  - James Thompson
- Office of the Chief Financial Officer
  - Richard Cota
- Joint Performance Management Office
  - Catherine Alexander
- Procurement Office
  - Marlo Krisberg
- Shuttle Processing
  - Stephen Minute
- Safety Health & Independent Assessment
  - Michael Bell
  - Larry Tucci
- Spaceport Services
  - Carol Cavanaugh
- International Space Station/Payload Processing
  - Cynthia Lodge
  - Jose Nunez
- Expendable Launch Vehicles and Payload Carriers Program Office
  - Mark Ruether
- External Relations & Business Development
  - Shannon Roberts
- Spaceport Engineering & Technology
  - Richard Stevens

InterKnowledge Corp

Dean Walsh (Facilitator and Consultant)

Competency Management

- A systematic method for understanding the competencies that are vital to the success of key strategic areas on the Center
- Select agreed set of competencies
- Document each competency type and level for all positions within the organizations
- Place competency information on-line and easily accessible
- Develop organizational development plan (succession planning & training)
- Develop individual development plans (and automate the process)

Competency Management at KSC

ID and minimize gap between what needs to be known and what is known to improve performance.

A CMS enables business systems to talk to each other in a common language and improve decision-making

The Competency Management System is a Center-wide decision support tool.

The competency model links strategic direction to position-level activities.

Competencies are knowledge-based capabilities.

Competency management is part of KSC's knowledge management effort.

System Metrics

Report Date : 3/2/01

Goal Statement:

Metric Description:

Assessment:

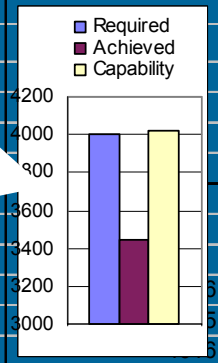
Total Center Gap

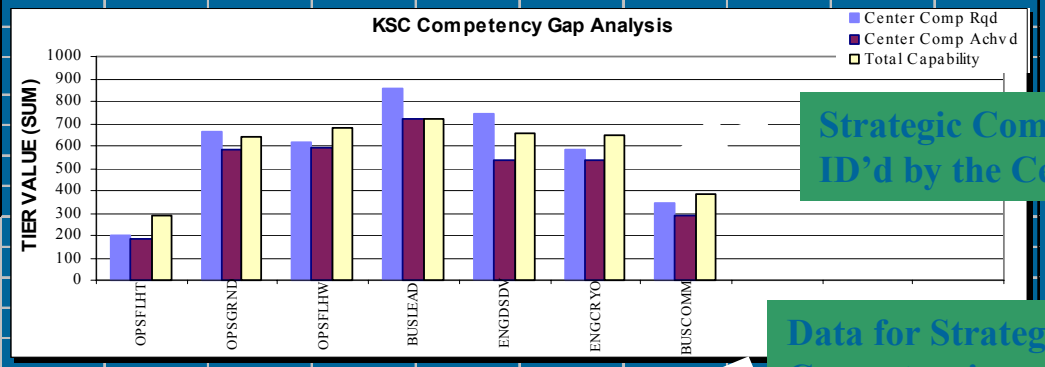
+ & (-) Gaps by Directorate

Strategic Competencies as ID'd by the Center

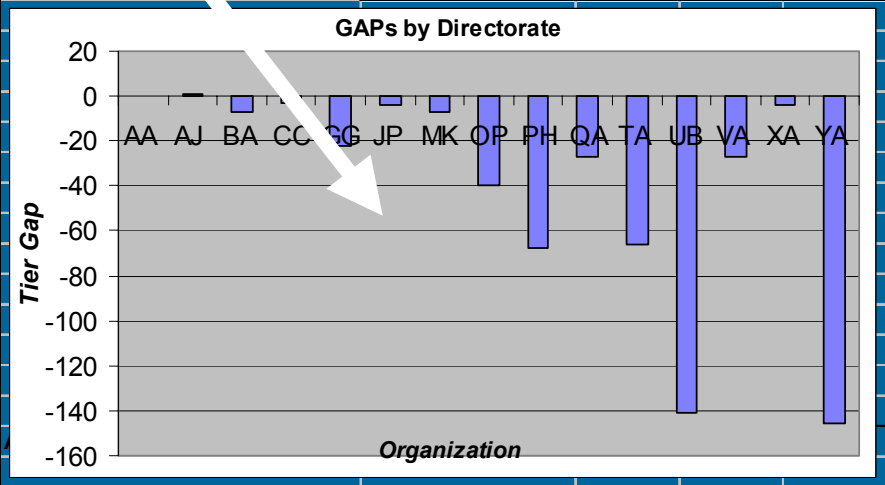
Data for Strategic Competencies

TOTAL GAPS





	OPSFLHT	OPSGRND	OPSFLHW	BUSLEAD	ENGDSDV	ENGCRYO	BUSCOMM			
Center Comp Rqd	198	663	619	859	742		344	0	0	0
Center Comp Achvd	188	584	589	721	536		288	0	0	0
GAP	-10	-79	-30	-138	-206	-42	-56	0	0	0
# Strategic Position	93	277	277	340	256	255	144	0	0	0
# Vacant Positions	0	1	2	2	1	0	2	0	0	0
Total # Emp w/Comp	133	302	313	340	307	294	177	0	0	0
Total Capability	292	644	677	718	654	649	382	0	0	0



	Organization	Required	Actual	Tier Gap
AA	Center Director	5	5	0
AJ	Equal Opportunity Office	4	5	1
BA	Workforce & Diversity Management	59	52	-7
CC	Chief Counsel Office	6	3	-3
GG	Chief Financial Officer	95	73	-22
JP	Joint Performance Management Off	20	16	-4
MK	Space Shuttle Integration Office	21	14	-7
OP	Procurement Directorate	188	148	-40
PH	Space Shuttle Processing	994	926	-68
QA	Safety, Health & Indep. Assessmen	157	130	-27
TA	Spaceport Services	283	217	-66
UB	Int'l Space Station/ Payload Process	1383	1242	-141
VA	ELV & Payload Carriers	198	171	-27
XA	Ext Relations & Bus Development	59	55	-4
YA	Spaceport Engineering & Technolog	534	388	-146
TOTAL		4006	3445	-561

Expert Seeker System Purpose

- Identify expertise within NASA, KSC and Academia
  - Help organize cross-functional project teams
  - Share knowledge and locate intellectual capital
- Allows experts more visibility
- Reduces search time
- Unifies myriad of data collections into web-enabled repository that can be easily searched
  - Personnel and Payroll System, Resumes, Goal Performance System, Training System.

Expert Seeker System Milestones

- April through September 1999 concept and design discussions
- August 1999 Expert Seeker Advisory Board Established
- February 2000 Prototype demonstrated
- October 2000 2nd Version 2 demonstrated
- December 2000 Version 3 demonstrated, linked to FL University System called the Searchable Answer Generating Environment (SAGE)
- December 2001 Roll out to focus group (KMWG)

Community of Practice Initiative

- Subgroup formed September 01
- Identify processes that are required to make CoPs work (enablers)
- Identify tools needed to be in place for enablers
- Identify existing COPs
- Identify the “key” core competencies in which to promote CoPs, based on:
  - Biggest impact on KSC performance
  - Lowest hanging fruit
- Break down key core competencies to the Directorate/Branch Level

KSC Input to NASA Best Practices Survey

- Tech Doc

Purpose of Resource/Process:

- Provides the user community with a full search capability across multiple databases for electronic documents repository as the primary source for retrieving the latest version of documentation produced at KSC. Provides revision control of approved documents, full text search and retrieval of published documents and security down to the document level

Nature of Content(Planetary Data/technical reports, etc.):

- Engineering and business documents, processes, presentations, and reports.

KSC Input to NASA Best Practices Survey

- KSC SEB Technical Library

Purpose of Resource/Process:

- Provides potential offerors all reference material related to a particular acquisition.

Nature of Content(Planetary Data/technical reports, etc.):

- All reference and compliance documents required by the Statement of Work and other guidance, resource information, and procedures.

KSC Input to NASA Best Practices Survey

- KSC SEB Procurement Library

Purpose of Resource/Process:

- Provides KSC procurement development teams with information related to previous competitive acquisitions at KSC

Nature of Content(Planetary Data/technical reports, etc.):

- Request for Proposals (Draft and Final), Source Evaluation Plans, Presentation Charts and Reports

KSC Input to NASA Best Practices Survey

- KSC's Procurement Office Semi-annual Self-assessment

Purpose of Resource/Process:

- Internal quality control, management insight, identify best practices, and vulnerability assessment.

Nature of Content(Planetary Data/technical reports, etc.):

- Statistical analysis, report of findings and recommended process, training and/or other appropriate corrective actions.

KSC Input to NASA Best Practices Survey

- KSC Shuttle Processing Elog

Purpose of Resource/Process:

- Elog stands for Electronic logbook. This database belongs to NASA Space Shuttle Processing at the Kennedy Space Center. It was developed to replace engineering hardcopy logbooks that were used to record historical events and tie-in notes important to different engineering groups. The database has flags that enable a user to search for meaningful topics. Today Elog, in addition to its primary purpose, also provides management status reports and information to support contractor evaluation. Standard reports are provided to an internal webpage for management review.

Nature of Content(Planetary Data/technical reports, etc.):

- Technical reports

KSC Input to NASA Best Practices Survey

- KSC Shuttle Processing Insight Machine

Purpose of Resource/Process:

- The "Insight System" is being developed as a tool by which the government obtains the insight needed to effectively assess the contractor's performance. This system because of it's flexibility in collecting and integrating data from a variety of sources is now being upgraded to allow the users to develop additional engineering reports, over and above the initial metric requirements. Applications can also be generated to collect our own data not presently being collected by other sources.

Nature of Content(Planetary Data/technical reports, etc.):

- Data associated with shuttle processing both contractor and NASA. This system makes web based reports available to the users through their web browser. The user has a choice of looking at the report through his browser or down loading the data in the report directly into an Excel format for further analysis. It also allows selected individuals to run ad-hoc reports in real time.

KSC Input to NASA Best Practices Survey

- Expert Seeker

Purpose of Resource/Process:

- Provide on-line Center wide search and reference capability to locate the names and career profiles of employees that have knowledge and experience within their area of expertise and discipline. Expert Seeker allows the search via name, expertise, directorate, or a combination of these fields.

Nature of Content(Planetary Data/technical reports, etc.):

- Various web-based interfaces with related software, which allow the user to search for experts within KSC. Once an expert is found, his or her credentials are listed in a resume style format. Also allows the user to search for experts within the Florida University system through SAGE, a web-based expertise locator that is hosted at http://www.sage.fiu.edu.

KSC Input to NASA Best Practices Survey

- KSC Annual Training and Development Survey

Purpose of Resource/Process:

- Provides an on-line capability for employees to document training and development needs, obtain supervisory approvals and automates the collection of information to support the Center's Annual Training Plan.

Nature of Content(Planetary Data/technical reports, etc.):

- Data associated with employee training and development, sources of training, costs, etc.

KSC Input to NASA Best Practices Survey

- Goal Performance Evaluation System (GPES)

Purpose of Resource/Process:

- Automates much of the Employee Performance Communication System (EPCS) and allows employees to see how they directly link to the accomplishment of their organization's mission, the Center's Implementation Plans and how they tie into the success of the Agency's Strategic Plans. The system captures employees accomplishments and facilitates reporting on organizational goals.

Nature of Content(Planetary Data/technical reports, etc.):

- Data associated with employee's performance and achievements linked to the Center's Implementation of the Agency's Strategic Plans.

KSC Input to NASA Best Practices Survey

- Customer Contact Center

Purpose of Resource/Process:

- Serves as a web site for all external and internal customers to see Frequently Asked Questions, ask unique questions, get answers and serve as an information clearing house. This in support of NPG 1090 to communicate and share information.

Nature of Content(Planetary Data/technical reports, etc.):

- Answers to questions http://contact.ksc.nasa.gov/index2.htm

KSC Input to NASA Best Practices Survey

- Business World

Purpose of Resource/Process:

- Portal for business system information

Nature of Content(Planetary Data/technical reports, etc.):

- Links to Safety information, Strategic Planning and Document Repositories